AMC Pamphlet AMCP 385-88

SAFETY DIGEST

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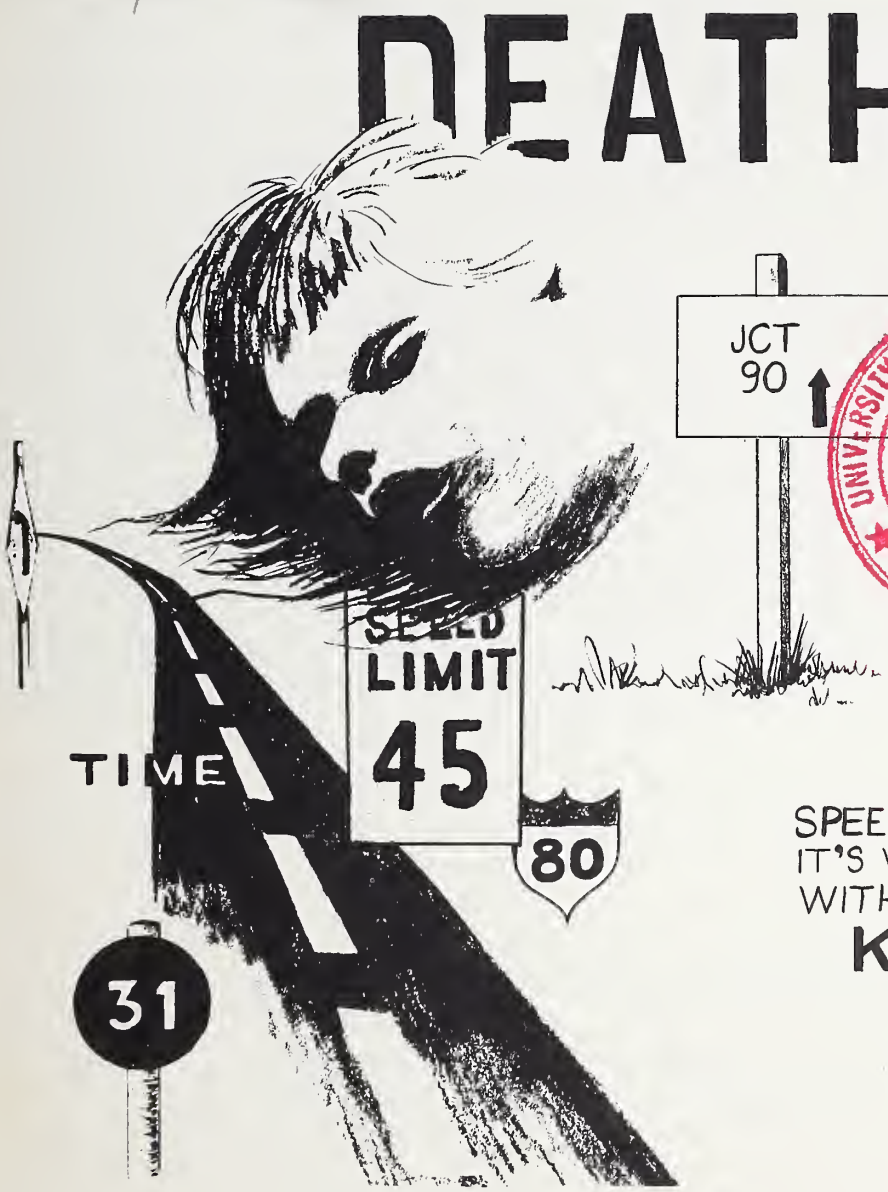

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SPEED IS RELATIVE..
IT'S WHAT COMES
WITH IT THAT
KILLS!

March 1969

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MATERIEL COMMAND
WASHINGTON, D.C. 20315

IN REPLY REFER TO

AMCSF-R

28 January 1969

SUBJECT: FY 1968 National Safety Council Award of Honor

SEE DISTRIBUTION

1. On 15 January 1969, Governor Howard N. Pyle, President of the National Safety Council, presented the Council's Award of Honor to the Army Materiel Command for outstanding safety achievements during FY 1968. This was the second successive year that we have received the award; and it was the fifth time it has been won by the Army Materiel Command since our formulation in 1962.

2. I am well aware of the fact that this award was presented to me in recognition of the performance of all members of the command. It is your record which determines whether AMC will continue to receive recognition by the Army and the National Safety Council for our accident prevention activities.

3. We have indeed compiled an outstanding record in the past six years. I charge each of you, however, to remain safety-minded and exert every effort to improve our safety performance during FY 1969, and further reduce injuries and property losses.

F. S. BESSON, JR.
General, USA
Commanding

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MR. PYLE, PRESIDENT OF THE NSC PRESENTS

THE AWARD OF HONOR TO GENERAL BESSON

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HEADQUARTERS
UNITED STATES ARMY MATERIEL COMMAND
WASHINGTON, D.C. 20315

AMC Pamphlet 385-88 MARCH 1969

The Safety Digest is an AMC Pamphlet prepared by the Safety Office Headquarters, U. S. Army Materiel Command. Its purpose is to disseminate information which can materially influence and improve safety programs at all Command establishments.

Articles are included to supplement technical knowledge as well as practical knowledge gained through experience. They provide a basis for the further refinement of safety measures already incorporated in operating procedures and process layout. To achieve maximum effectiveness, the Safety Digest should be given widespread circulation at each AMC establishment.

Articles appearing in the Safety Digest are unclassified and are not copyrighted. They may be reproduced as desired in order to bring pertinent accident prevention information to the attention of all employees. The Army Materiel Command Safety Digest should be given a credit line when articles are extracted.

Unclassified material believed to be of interest or benefit to other establishments is welcome for publication in the Safety Digest. Please send articles for review to: U. S. Army Materiel Command Field Safety Agency, Charlestown, Indiana. If possible, include pictures, charts, drawings, and illustrations that clarify and heighten interest in your presentation.

(AMCSF)

*FOR THE COMMANDER:

CLARENCE J. LANG
Major General, USA
Chief of Staff

OFFICIAL:

WM. A. GREGORY
Colonel, GS
Chief, Administrative Office

Special Distribution

IN THIS ISSUE

FOREWORD I
IN THIS ISSUE II

BE ALERT FOR BROWN RECLUSE SPIDERS 1
AIR SAFETY AWARD MADE TO AVLABS DIVISION CHIEF 5
PACKAGE BACKRESTS AND OVERHEAD GUARDS DO NOT PREVENT FORKLIFT ACCIDENTS 6
ENLISTED MEN PARTICIPATE IN MOTOR VEHICLE SAFETY 9
EMPTY AEROSOL SPRAY CANS MADE SAFE 10
AMMRC DRIVERS CITED FOR SAFETY RECORDS 11
CURRENT EVENTS
- PAUSE FOR SMOKE PROVOKES ACTION 12
- MAXIM: KEEP YOUR HEAD IN THE CLEAR 13
- MISPLACED FINGER IS SHORTENED 14
- SUPERVISOR GIVES PAINFUL DEMONSTRATION 16
- PHOTOFLASH BOMB RESISTS DESTRUCTION 16

SWITCHING LANES 18
IS IT SAFE TO LIFT THAT? 19
HELP YOUR WORKERS TO AVOID FALLS 20
AMC SAFETY COMMENDATION PUBLICIZED 23
DEPOT COMMANDER CHANGES SAFETY SIGN 23
SAFETY GLASSES PROTECT CHEMIST'S EYES 24
CUT WOOS KILLER 25
NATIONAL SAFETY COUNCIL AWARD OF HONOR CERTIFIED FOR U. S. A. BALLISTIC RESEARCH LABORATORIES 25
EXPLOSIVES SAFETY
- SERIOUS BURNS AVERTED 26
- SOUVENIRS CAN BE DEADLY 27
- CAN YOU MAKE IT SAFER? 29

OFF-THE-JOB SAFETY 32
SENECA ARMY DEPOT WORKER JOINS THE WISE OWL CLUB 34
IDEAS FOR SAFETY 34
ROCK ISLAND ARSENAL WINS AMC AWARD OF HONOR FOR SAFETY 35
WATERVLIET ARSENAL WINS SAFETY AWARD 35
RADFORD ARMY AMMUNITION PLANT WINS NSC AWARD OF MERIT 35
UNSAFE AWARD CREATES SAFETY AWARENESS 36
DO YOU KNOW? 37
REFERENCE PUBLICATIONS 38
THE WRONG CORD 39
WELL! DID YOU KNOW? 40
MINISKIRTS FOR SAFETY? 41

BE ALERT FOR BROWN RECLUSE SPIDERS .....

Mrs. L. Glick, R. N.
Supervisor of Nurses, National Gypsum Company
Kansas Army Ammunition Plant

Reactivation of the Kansas Army Ammunition Plant revealed a small but serious safety hazard. Loxosceles reclusa, aptly nicknamed the Brown Recluse Spider, was present in reactivated buildings and ramps.

The Loxosceles reclusa is a spider of medium size, approximately three-eighths of an inch long and three-sixteenths of an inch wide. The female is usually slightly larger than the male. Color may vary from light fawn to a dark brown. A definite fiddle-shaped pattern is obvious on the anterior portion of the carapace. (See Photo 1.) This violin design is darker than the overall color of the spider and is easily identifiable in the adult. The fiddle-shaped design is present but less obvious in the young spiderlings. Close investigation of the species reveals six instead of the usual eight eyes present in most species of spiders. Minute brown hairs, which are not obvious to the unaided eye, cover the entire body and legs. Its general appearance gives the impression of a dime to quarter sized spider that is long legged, fragile, and has a brown patent leather gloss to its entire body.

The habitat of the Brown Recluse increases his threat to man. It has a predilection for crumpled newsprint, dark recesses of buildings, packing boxes, shoes and folded clothing. All these lend measurably to his transfer from his present known locale to more northward and eastward areas. The southeastern and central United States now seem to be his main domicile, but with shipments of materiel, summer vacationers, and mobility of the population in general, we become more aware each summer of his spread. Reports of characteristic type lesions seem to prove his progressive journey into adjoining states.

Initial investigation of this arthropod bite was recorded by L. F. Schumaus in his article "Case of Arachanoidism" in the Journal of the American Medical

Association[1]. The case cited occurred in Kansas in 1928. Curtis W. Wingo gives a very accurate and complete description of the typical lesion and is quoted below:

"The typical reaction in man following a bite by the Brown Recluse is necrosis (killed tissue) at the site of the bite. The victim may not be aware of being bitten for two or three hours, or a painful reaction may occur immediately. A stinging sensation is usually followed by intense pain. A small blister usually rises and a large area around the bite becomes congested and swollen. The patient may become restless, feverish and have difficulty in sleeping. The local pain is frequently quite intense and the area surrounding the bite remains congested and hard to touch for some time. The tissue affected locally by the venom is killed and gradually sloughs away, exposing the underlying muscles. The edges of the wound thicken and are raised, while the central area is filled by dense scar tissue. Healing takes place quite slowly and may take six to eight weeks. The end result is a sunken scar which has been described as resembling "a hole punched or scooped from the body". Scars ranging from the size of a penny to a half-dollar have been reported.

"The necrotic condition described above is typical of all bites of the Brown Recluse. However, in some cases a general systemic reaction has also occurred. In one case the patient broke out with a rash resembling that of scarlet fever. In another case the kidneys were apparently affected, causing bloody urine to be passed. These systemic disturbances probably occur infrequently and are the result of a "full" bite (i.e., the injection of a maximum amount of venom) or extreme sensitivity to venom. This general reaction to the bite of the Brown Recluse is certainly a serious condition and hospitalization of the patient is usually required. Those in poor general physical condition, young children and older people are more apt to be affected seriously by the bite of the Brown Recluse." [2]

---

1. "Case of Arachanoidism", Journal of the American Medical Association, Vol. 92: pages 1265-1269, 1929, author: L. F. Schmaus.
2. "Necrotic Arachanoidism", American Journal of Tropical Medicine and Hygiene, 7: 165-184, 1958, authors C. W. Wingo, J. A. Atkins, W. A. Sodeman, J. E. Flynn. See also "Probable Cause of Necrotic Spider Bite in the Midwest", Science, Vol. 126:73, 1957, authors J. A. Atkins, C. W. Wingo and W. A. Sodeman.

Treatment of the lesion resulting from the bite of the Brown Recluse may vary according to the amount of venom injection, length of time lapsed between time of bite and treatment, and the susceptibility of the patient to the venom. The individual who is bitten should be taken to the medical facility immediately and treatment should be performed as prescribed by a physician. Details pertaining to time, location and conditions surrounding the spider bite should be made available to medical personnel immediately.

Debridement is done at necessary intervals as tissue sloughs. When infection appears in the lesion, antibiotics are used as indicated. The accompanying series of pictures reveals the results of this treatment used on a lesion which was first seen about 48 hours after the bite occurred. Time lapse as indicated by the length of time between dates on photographs shows a definite improvement in the lesion.

Emphasis should be given to the recurrence of a bleb at the initial site of the bite almost six weeks following the original blister. This is typical of the lesions that have been seen at Kansas Army Ammunition Plant. Care must be taken to continue supportive treatment until recurrence of blebs ceases.

Observation at Kansas Army Ammunition Plant has shown that the Brown Recluse spiders vary their habitats according to season and weather conditions. On rainy days they have been observed moving from the outside into wooden ramp areas. Series of case skins with webs and remains of prey have also been collected to establish that this spider does establish a home territory.

Mating occurs from early February to early October, with the heaviest period of mating in June and July. This observation was made in Arkansas but it seems to hold true in surrounding states. No eggs were produced in October, November, December or January.

Due to the wide variance in longevity records of both male and female and the variation of time between egg sacs (from 13 days to 65 days), biannual spraying of all known habitats is recommended. Spraying during the months of May and October is suggested.

A concentration of 45 per cent Chlordane mixed with an emulsifiable concentrated oil in the proportions of

one part Chlordane to 48 parts oil may be used for outside or basement type spraying. The concentration of $12\frac{1}{2}$ per cent Lindane mixed with an emulsifiable oil in proportions of concentrated Lindane or Chlordane may be mixed one to 48 parts with water for inside extermination.

Editor's Note: Additional information may be obtained from "Biology of the Brown Recluse Spider", Bulletin 711, May 1966, Agricultural Experimental Station, Division of Agriculture, University of Arkansas, Fayetteville, Arkansas.

If the Brown Recluse Spider occurs in your locality or its presence is suspected the nearest county office of your state university's Agricultural Extension Service may be able to provide recommendations on control measures. The assistance of the sanitarian of the local health department should be contacted. He may be able to provide assistance from entomologists with the State health department.

1

2

3

4

Photo 1 shows the distinct fiddle shaped marking and the hairy body covering of the Brown Recluse Spider.

Photos 2 to 4 show the lesion that resulted when a worker at the Kansas Army Ammunition Plant was bitten by a Brown Recluse Spider. The pictures were made on various dates during a five week period.

AIR SAFETY AWARD MADE TO AVLABS DIVISION CHIEF

Francis P. McCourt, Chief, Safety and Survivability Division, U. S. Army Aviation Materiel Laboratories (AVLABS), received the 1967-1968 James H. McClellan Aviation Safety Award at the Army Aviation Association of America's 10th Annual Honors Luncheon, Washington, D. C. This national award recognizes his contributions to air safety during his 35 years in aviation. McCourt has made major contributions to aircraft fire prevention through the development of emulsified (safe) fuels.

McCourt's division at AVLABS is responsible for aircraft crash injury research, aircrew and aircraft armor systems, reduction of enemy detection, and crash-resistant fuel tank design, fabrication and testing.

The McClellan Award was established in 1959 by friends of U. S. Senator John L. McClellan of Arkansas, in memory of his son, James H. McClellan, who was killed in a 1958 civilian aircraft accident. It is presented annually to an individual who has made outstanding contributions to Army Aviation safety.

A retired Army Reserve Lieutenant Colonel, McCourt served in World War II and the Korean conflict. He is a rated pilot for both multi-engine fixed-wing aircraft and helicopters.

McCourt also holds the Laura Taber Barbour Award for Flight Safety (1966) and the Department of the Army's R&D Technical Achievement Award for Aviation Crash Injury Research (1962).

McCourt received the award from the Honorable Howard E. Haugerud, Deputy Inspector General-Foreign Assistance, Department of State, and President of the James H. McClellan Foundation.

In the photo Mr. McCourt (left) is shown receiving the congratulations of Colonel Eduardo M. Soler. Commanding Officer of the U. S. Army Aviation Materiel Laboratories.

PACKAGE BACKRESTS AND OVERHEAD GUARDS ... DO NOT PREVENT FORKLIFT ACCIDENTS ...

One lesson learned long ago is that the operator of a forklift truck needs protection from a load that may fall back upon him. The obvious solution is to install a shield between the worker and the load. An appropriate requirement for overhead guards is provided in specific terms in Army Technical Manual 743-200.*

Overhead guards do provide much of the needed protection. Like the many safety devices on automobiles and other machines, however, protective guards will not prevent accidents. When accidents do occur, the protective equipment may not always prevent injuries.

A recent accident at an Army Materiel Command installation shows how guards may provide incomplete protection. An operator was using a forklift truck like the one shown in Photo 1. The equipment had been procured through Army channels. The procuring agency specified the applicable Military Specifications (MIL-T-21870, dated 24 May 1966) when it ordered the item. It made certain the equipment was tested and accepted under the criteria contained in these specifications.

(Requirements may be revised long before a piece of equipment wears out. The forklift truck in Photo 1 is not provided with a load backrest (vertical package guard), now required by paragraph 4.3.7.3, Change 19, TM 743-200, 13 May 1968. The backrest might not have prevented the accident described here.)

The operator was using the machine to store engines in stacks three tiers high. An engine and its container weighed almost 3,000 pounds. Examples of the three-high tiers are shown dimly in Photo 1 and more clearly in Photo 4. A single containerized engine is shown in Photo 3.

---

* TM 743-200 is also identified as Department of the Navy PUB 284, Air Force Manual 67-3, US Marine Corps Joint Publication NAVMC 1101 and Defense Supply Agency Manual DSAM 4145.1.

Photos 3 and 4 show the imperfect condition of the container skids. Half of a skid is missing from the container in Photo 3. Uneven and unstable tiers resulted when the containers were placed in stacks.

The forklift operator set a third engine atop a two-high tier and began to back out, lowering the fork prongs. He failed to observe the skids were broken from the container at the base of the tier. As he moved back the poorly supported second and third level container toppled forward. The uppermost container struck the top of the forklift mast and rolled it over upon the headguard. The falling weight crushed the guard, as shown in Photo 2. The steering wheel, steering column and hydraulic controls were also damaged.

Another worker saw the falling containers and shouted a warning. The operator jumped from the machine and escaped injury.

The engines were a retrograde item from the Southeast Asia Theatre. Items in similar used and no longer like-new containers may be received at many Army Materiel Command installations. Similar hazards may be faced by many forklift operators. Their supervisors and safety personnel would be well-advised to emphasize instructions similar to those issued by the installation that experienced the accident.

▶1. Information on the cause and the result of the accident was disseminated to all forklift operators and their supervisors. They were made to understand that currently used overhead guards would not withstand the falling impact of an extremely heavy unitized load. Special care by the operator was required in order to handle this type of load in safety.

▶2. All concerned personnel were reinstructed in the necessity for close observance of stacking methods to insure stable stacks.

It would also be beneficial to remind forklift operators that overhead guards offer only a limited amount of protection. USA Standard B56.1, Safety Code for Powered Industrial Trucks, warns that the guard is intended to offer protection from the impact of small packages, boxes and bagged materials. "It is impracticable to build a guard of sufficient strength to

withstand the impact of a capacity load since such a guard would constitute a safety hazard because its structure would be so large that it might interfere with good visibility and would weigh so much that it might make the truck top-heavy and unstable."

1

2

3

4

ENLISTED MEN PARTICIPATE IN MOTOR VEHICLE SAFETY

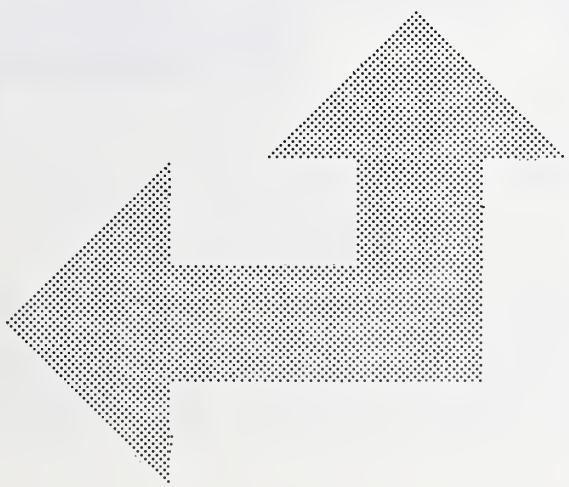
Industrial Health & Safety Division
Fort Detrick

● All levels of military command are aware that motor vehicle accidents among enlisted men is a serious non-combat source of disabling injury.

1LT Allen W. Guisinger, Commanding Officer, Headquarters Company, U. S. Army Garrison, at Fort Detrick, Frederick, Maryland, decided that a monthly Safety Poster Contest would increase attention to safe driving. The posters are judged on the basis of originality, neatness and total effect. The first place winner received a three-day middle-of-the-week pass. The second place winner received a three-day pass beginning on Friday. The posters were then displayed in the enlisted men's quarters.

During September, October and November 1968 the first place winners were SP5 William R. Harrigan, SP5 Siegmund Wolodkewitsch and SP5 Lemuel G. Beaver. The second place winners were PFC Ronald F. White, SP4 John S. Wilburn and SP4 John A. Oak. The contest received active participation by many enlisted men. The results were excellent and indicated a local trend toward greater awareness of the value of safe driving.

■ One of the first place posters is this month's front cover.



EMPTY AEROSOL SPRAY CANS MADE SAFE

The safe disposition of used aerosol cans can present a problem. Some of the pressure in the container is likely to remain unused when the can becomes "empty". If the container is exposed to heat, as from an open flame, the pressure may increase until an explosion occurs.

1

Empty aerosol can is placed (upside down) in the lower steel cylinder.

2

The handle is then depressed. The upper steel cylinder telescopes over the lower, until the pin in picture #3 punctures the bottom of the aerosol can.

3

View of the upper cylinder and the pin which punctures the aerosol can.

4

The pressure is released and the handle is drawn up to remove the aerosol can from the lower cylinder.

Joe P. O'Dea, Safety Director for Mason & Hanger - Silas Mason Co., Inc., has furnished these pictures to show how used aerosol cans are made safe at the Cornhusker Army Ammunition Plant. Shop safety policies require the destruction of pressurized cans as soon as they become empty.

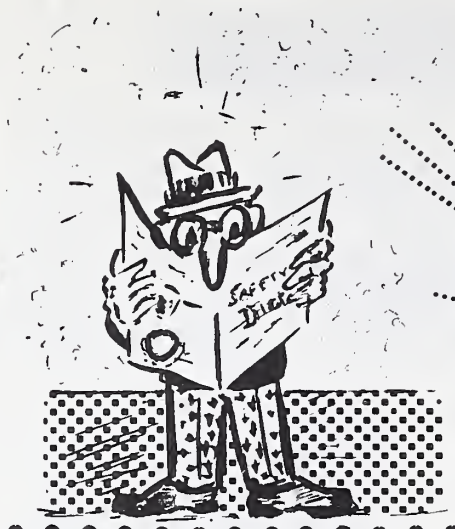
The destruction device is fabricated in the plant welding shop from scrap metal and at a small cost. The unit is color coded for easy identification.

Similar locally fabricated devices are in use at some other Army Materiel Command installations. The September 1964 Safety Digest, AMC Pamphlet 385-61, contained a drawing of a similar device constructed at Letterkenny Army Depot.

****

AMMRC DRIVERS CITED FOR SAFETY RECORDS

Special Act awards have been made to four employees of the Army Materials and Mechanics Research Center for their safe driving records. Arthur F. Jones, Associate for Technology (left) presented the awards. Shown with their certificates are Thomas B. Strickland 2 years; William DeFeo over $5\frac{1}{2}$ years; and Richard Walsh, over 21 years of accident-free driving. Not shown is James B. McDonald, who had passed the 18 year accident-free mark. John F. Ward, Chief of the AMMRC Transportation and Traffic Management Section and Sidney Levin, Chief, Industrial Health and Safety Branch are shown at the right.



Current Events

PAUSE FOR SMOKE PROVOKES ACTION

■ A contractor employed mechanic's helper at an Army installation was cleaning a fuel pump assembly in an open can of gasoline. It was midafternoon and time for a short break. He stepped out of the building and stopped to light a cigarette. He was about four feet away from the spot where he had been working.

His Zippo lighter provided a flame. As he held the lighter steady to light the cigarette, fumes from the gasoline on his hands came into contact with the flame. The fumes ignited.

Startled, he dropped the open lighter. It continued to burn after it landed. Fumes from the open gasoline can covered the ground this close to the worksite and these were almost instantly ignited.

The worker had the presence of mind to fight the fire. He grabbed for a carbon dioxide fire extinguisher that was hanging on the wall of the building above the can of gasoline. In his haste his foot struck the can sharply and the gasoline spilled on the floor. The flames spread.

A second worker joined the fight against the fire. By this time the first worker's clothing was flaming, and the immediate problem was to save him. The would-be rescuer seized the fire extinguisher and found it

too hot for effective use.

A third worker seized the burning worker, pushed him into a nearby puddle of water, and extinguished the flames. By this time he had sustained first and second degree burns on his right leg, back and hands. These were severe enough to cause an estimated ten days lost time.

The spilled gasoline was extinguished before it caused other damage.

The unsafe acts that led to the accident were promptly identified. Gasoline rather than a solvent had been used as a cleaner. The worker had attempted to smoke near the open gasoline in a "no smoking" area.

● More and improved supervision was directed by the contractor's plant manager. All employees were freshly instructed to use only an approved solvent as a cleaning agent and to obey "no smoking" signs at all times.

****

MAXIM: KEEP YOUR HEAD IN THE CLEAR

A forklift was not operating properly, and two mechanics were busy trying to locate and correct the defect. They found it necessary to have the motor operate while they searched for the trouble. One tried to see if the boom controls were the source of the problem and the second man gave his attention to the transmission. They worked from opposite sides of the machine.

The mechanic checking the boom tilted it forward. This left a clear space between the boom and the frame of the forklift and offered the second worker a chance for a better view of the transmission. He leaned forward, with his head in the opening. The man at the controls failed to see this action by his fellow worker. Intent on his own check, he actuated the control lever for a back tilt.

The boom tilted, closing the space between it and the frame of the machine. The second worker was caught by surprise and had no time to pull back his head. Before the man at the controls saw his companion's predicament and stopped the tilting movement, the man's

head was firmly caught. A bolt on the boom protrudea about one inch. This penetrated the man's head and caused a fracture in the left temple region. He was expected to be disabled for a month.

Vigorous measures were taken to instruct heavy equipment mechanics on safety and the rules they were to follow while working on equipment. The need for coordination between mechanics working on the same equipment was stressed.

****

MISPLACED FINGER IS SHORTENED

An old safety rule can be stated in these words: "If a physical condition exists that can contribute to an injury, it will eventually contribute to an injury." The truth of the rule was recently demonstrated at an Army ammunition plant.

Two men worked as a team in seating and torquing the fuze on a projectile. Operator No. 1 removed the fuzed projectile from a conveyor belt and placed it in a vertical vise. Operator No. 2 oriented the wrench slots on the fuze by turning the projectile as necessary in the vise. He then operated a hand valve to close the jaws of the vise. Operator No. 1 engaged a spanner wrench with the slots in the fuze and pulled the wrench toward his body to seat the fuze. (See Photo 1,) Operator No. 2 then opened the vise, removed the projectile and placed it on the conveyor belt.

The equipment used by the men contained a physical condition that seemed unlikely to cause an injury. In the center of the vise enclosure there was a 9/16-inch diameter hole. (See Photo 2.) It was so small that only the little finger on the worker's hand could enter it. The finger could enter the hole only when the hand was placed in a somewhat awkward and unnatural position on the guard.

A day came when the little finger and the hole came together. Operator No. 1 put his wrench in place and pulled against it to seat the fuze. He had placed

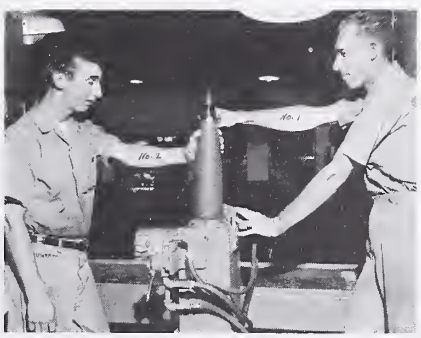
his left hand against the shield to support his pull. Operator No. 2 had not yet closed the vise and the projectile turned freely. This threw Operator No. 1 off balance and his weight fell upon the hand on the shield. His little finger slipped into the hole. As this was happening Operator No. 2 turned the valve that actuated the vise. The jaw of the vise moved with a scissor-like action and amputated the end of the finger that slipped through the hole.

Investigators questioned whether the accident could have happened exactly as described above. Perhaps the projectiles were flowing down the line at a reduced rate. This might have given the operator time to think of things other than his work. Perhaps he had unconsciously placed his little finger in the hole where its tip could be sheared off by the vise.

The two theories on how the accident occurred did not obscure one fact. The part of the operator's little finger between the nail and the first joint was missing. The doctor found it necessary to remove the first joint of the finger.

The hole in the vise shield was covered to prevent another person inserting his little finger in it. (See Photo 3.)

1



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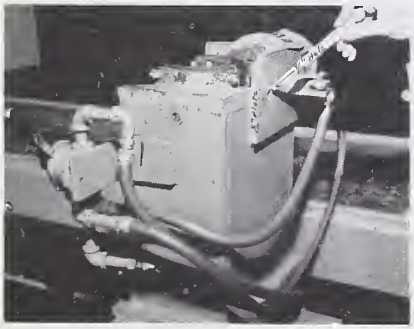

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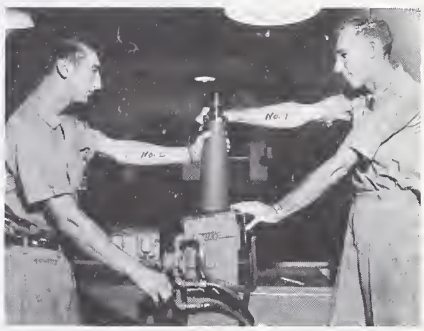

SUPERVISOR GIVES PAINFUL DEMONSTRATION

The operator of a hydraulic press was having difficulty. The parts he was making were being rejected. He asked his supervisor for fresh instructions on the machine.

The supervisor took a position directly behind the seated operator. He extended his right arm over the man's shoulder and began to demonstrate the operation. He took a piece of the component material in his hand, holding it between the thumb and middle finger, with his index finger over the end that was to be crimped. He placed the material in the holding fixture, removed his hand and told the operator to actuate the dual palm valves. This was done.

They repeated the procedure. On the third demonstration the supervisor failed to remove his hand before the operator actuated the palm valves. The press functioned, and the supervisor's index finger was caught between the crimping punch and the part. The end joint of the index finger was amputated.

Blame for the accident was shared by the men. The supervisor committed an unsafe act when he placed his hand in the immediate vicinity of the crimping punch while the operator was at the controls. The operator was negligent when he operated the controls before the supervisor removed his hand from the part. Both men were given written reprimands. The supervisor received fresh instructions on the method he was to use when he gave instructions to his workers. These included seating himself at the hydraulic press and having the operator observe while he demonstrated the operation.

****

PHOTOFLASH BOMB RESISTS DESTRUCTION

An incident involving M-122 photoflash bombs, FSN 1325-301-1102-E927, revealed a destruction problem. Twenty M-122 bombs and 120 M120A1 photoflash bombs, FSN 1325-028-5346-E926 were authorized to be destroyed. The work began with the 120 M120A1 bombs. Four-ounce charges of Composition C-4 were placed in their fuze

cavities and were detonated electrically. Complete destruction was obtained.

The M-122 photoflash bombs were more difficult to destroy. Detonation of four ounces of Composition C-4 in their fuze cavities produced only ruptured bomb casings and some burned filler. These bombs were covered with a large amount of wood and were burned in place. Visual inspection then indicated that the bomb filler had been destroyed.

The remains of the M-122 bombs were loaded on a dump truck and moved to the installation's ammunition burning ground. The material was to be flashed again before the metal parts were salvaged. When the bombs were dumped from the truck, one bomb ignited and burned.

The driver was uninjured. The fire caused a small amount of damage to the truck.

The M-122 photoflash bombs had been filled with aluminum and magnesium powders. These powders proved to be less sensitive to detonation than the photoflash powder in the M120A1 bombs. The incident further demonstrated that intense burning alone was not sufficient to guarantee destruction of the aluminum and magnesium powder filler.

To prevent additional incidents of unwanted bomb ignition, the installation's standing operating procedure was amended to require the use of a large explosive charge to detonate M-122 bombs.

This photo shows the ammunition burning ground scene after the accidentally ignited remains of the M-122 bomb burned out.

SWITCHING LANES

·····▶ While whirling along a stretch of Interstate Highway recently, we observed that most drivers can be classified either as "flicker-switchers" or as "switcher-flickers".

The "flicker-switcher" flicks his turn signal before he switches lanes. And since this type communicates his intention in advance, you can bet that he also takes a visual check before he makes his move. By thinking, looking and signaling in advance of his maneuver, he's protecting himself and fellow sharers of the road.

Long live the "flicker-switcher" ... and may his tribe increase!

In contrast, the "switcher-flicker" begins to switch lanes first, and then starts his turn signal to blinking. He "flicks" from blind habit, with no conscious thought about the importance of advance warning. And chances are that he usually "switches" and "flicks" mechanically, without a glance in his rear-view mirror and over his left shoulder to check that blind spot at port side and rear. The left wheels of the "switcher-flicker" have often traveled over the border before he's signaled the news that he's entering new territory. That's why his too-late "flick" is sometimes followed by a startled "Woops!" punctuated by the costly crunch of metal.

Short live the "switcher-flicker" ... and may his tribe decrease.

The winking signal of the "flicker-switcher" is a true warning because it speaks in future tense: "I'll turn soon -- take heed." The "switcher-flicker's" signal, however, speaks in present tense: "I'm turning." Or even in past tense: "I've turned." To have any cautionary value, a message must be blinked or beeped or bellowed in advance of the action contemplated. Any later signal is a non-warning.

You'll find other kinds of signalers creating crises in our traffic lanes: the "switcher-nonflicker",

who gives no warning at all; the "flick-right switch-lefter" and "flick-right no-switcher", and vice versa, who can fake you off your wheels.

Do your turn signals communicate consistently? Correctly? In future tense? Help the "flicker-switcher" tribe to increase. Help the "switcher-flicker" tribe (and collisions and sideswipes) to decrease.

◖- The Eye
Mason & Hanger - Silas Mason Co., Inc.
Iowa Army Ammunition Plant

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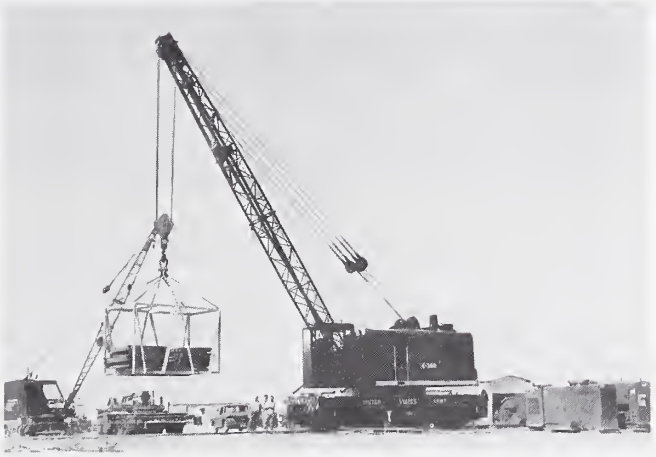
IS IT SAFE TO LIFT THAT?



Tooele Army Depot intends to make certain the lifting device is safe before its workers try to hoist a heavy load. In the picture above a locomotive crane is undergoing a load test. In the last few months 1,250 cables and slings, 186 cranes and hoists, and 400 other lifting devices were tested. When the test revealed a defect, the item was repaired before it was returned to the organization to which it was assigned. If an item could not be repaired, disposal action was started.

HELP YOUR WORKERS TO AVOID FALLS

Every individual in your organization is highly motivated to prevent one type of accident. He does not want to fall. Every moment of his waking, upright life involves a balancing exercise to avoid falling down. He learned in childhood that loss of balance was a discomforting experience and the result of falling was usually unpleasant and sometimes damaging.

In spite of this universal motivation, Army Materiel Command personnel continue to fall down. Year after year falls continue to be the leading AMC injury cause.[1] In FY 1968 22.7 per cent of the AMC disabling injuries were the result of falls. The yearly percentage of falls fluctuates in a narrow range between 22 and 26 per cent. One or more of its personnel have died from a falling injury every year AMC has been in existence.

If they are motivated to avoid falling, why do AMC personnel continue to fall and injure themselves?

One answer is that they may not be getting the practical help they need and deserve from their supervisors and safety personnel. If you have an assignment in either of these areas, it may be possible for you to do more than you are now doing to prevent falls.

The causes of falls are usually simple and obvious. Easily performed actions, taken promptly whenever the need arises, can prevent most falls. Alertness, observation and good habits, developed and practiced regularly, will enable you to correct the situations that cause most falls.

You can make profitable use of a checklist, mental or written, on falls causes to see and correct. Here are samples of questions that may belong on your checklist. You should add and subtract from this list until you have one that will serve your needs.

1. See "Falls' Injury Percentage Stays High" in July 1968 Safety Digest, AMC Pamphlet 385-84.

Is the individual employee frequently reminded of the need to correct conditions that are likely to cause falls?

Are hazardous areas marked in such a manner that the worker will recognize them and protect himself?

Is the employee trained or encouraged to call attention to conditions that create opportunities for falls?

Is he careful to wear clothing and shoes that reduce the likelihood of falls and fall injuries?

Do female employees wear high heels? You are not likely to stop this, but you may persuade them not to do particular activities while wearing high heels.

Is the individual prohibited from hurrying or running in offices, shops and on stairs?

Are slippery conditions caused by ice, snow, water and liquid spills corrected promptly?

Are parking lots and other ground areas kept as level and clean as possible?

Are floors kept free of accumulations of materials that produce tripping hazards?

Are floors kept free of unnecessary holes, cracks and other defects?

Are office and shop floors kept free of wires that create tripping hazards?

Are floorboards, walkways and floor covers securely placed and maintained in good, unhazardous condition?

Are pits and holes refilled, covered or protected by barriers?

Are non-skid surfacing materials used wherever needed?

Do waxing, cleaning and buffing leave slippery floors?

Are supplies and equipment arranged to eliminate tripping hazards?

Are aisles, walks, paths kept open for traffic?

Is office, shop, work areas and outdoor housekeeping good?

Do you have safety standards to which all ladders must conform? And do all your ladders conform to these standards?

Are all ladders inspected at periodic intervals?

Are ladder rungs and stair treads sound, clean and free of paint?

Is there an enforced program for ladder storage and protection?

Are ladders equipped with safety devices such as non-skid safety shoes and locking hinges?

Is the correct ladder selected for the job at hand?

Are the bottoms of ladders placed on sound surfaces and securely braced before being mounted?

Are fixed ladders and stairs anchored firmly to supporting structures?

Are secure handrails provided for platforms?

Do handrails have sharp, splintered edges, and rusty or oily surfaces that reduce their usefulness for protection?

Are stairs well lighted?

Are stair tread surfaces slip-resistant?

Do ramp and inclined surfaces provide good traction?

Are handrails provided for ramps?

Are suspended surfaces hung from strong, securely fastened supports?

Do platforms and scaffolds have guardrails?

Are linemen's belts checked to make certain they are strong and serviceable, rather than worn and rotted from age?

• Causes for individual falls abound in every environment. Familiarity with your job and your surroundings should suggest many additional items for your checklist.

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AMC SAFETY COMMENDATION PUBLICIZED

AMMRC AWARDED AMC COMMENDATION FOR
SAFETY FY68 - LET'S CONTINUE THIS
FINE SUPPORT OF OUR SAFETY PROGRAM
AMMRC SAFETY RECORD
INJURIES FY-68 FY-69
LOST TIME 0 0
FIRST AID 82 24
545 DAYS WITHOUT A LOST TIME INJURY
PREVIOUS RECORD 134 DAYS

The first message for the new safety program sign at the Main Gate at the Army Materials and Mechanics Research Center in Watertown, Massachusetts, is inspected by Mr. Sidney Levin (left), who designed the sign, and Mr. Henry Kent, who assembled it. Mr. Levin is Chief of AMMRC's Industrial Health and Safety Branch, and Mr. Kent is associated with the Center's Facilities Branch.

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DEPOT COMMANDER CHANGES SAFETY SIGN

When Tooele Army Depot personnel worked 200 consecutive days without a single recorded lost time accident, Colonel Beverly F. O'Neal, Jr., Commanding Officer, personnally changed the safety sign. At the time the picture was made the Depot had recorded 5,157,502 man-hours without a disabling injury. This exceeded the Depot's previous record by over one-fourth million man-hours.

SAFETY GLASSES PROTECT CHEMIST'S EYES

Mr. H. Kramer, a research chemist at Picatinny Arsenal, was experimentally measuring the equilibrium constant of lead azide and water in a vacuum laboratory set-up consisting of extensive glassware. He was using freshly synthesized lead azide.

In the process of sealing off the break-seal tube in the system with a gas torch, he noticed that an in-line mercury manometer indicated a sudden pressure build-up. As he quickly stepped away, an explosion occurred and the laboratory area was showered with glass particles.

Review of the experiment revealed the following: The lead azide was being cooled at liquid nitrogen temperature because of presence of water. A very small quantity of lead azide in the form of fine powder got up into the neck of the tube. Since lead azide has a high degree of surface charge, it adhered to the glass tubing.

As shown in the photo, Mr. Kramer's left lens was struck by the flying glass particles. These shattered the lens, but it remained within the safety frames. Although several glass particles became imbedded in his face, no eye damage was incurred. The incident left no doubt that safety eyewear rendered valuable protection in preventing eye damage. As a result of this incident, stainless steel dewars will replace glass in the newly designed capsule.

CUT WOOS KILLER

■ Lockjaw (tetanus) kills 50 per cent of its victims, and every death is a needless tragedy. Immunization that is inexpensive and close to 100 per cent effective is available to everyone today. Yet it is estimated that fewer than one-third of our children have received the vaccine that protects against tetanus.

Tetanus bacilli can enter the human body through trivial wounds that may require no medical attention. The first symptoms of tetanus may be restlessness, irritability, and muscular stiffness in the jaw, neck, or limbs. By the time these symptoms occur, the tetanus poison has reached the nervous system and the victim is beyond medical help.

The victim's jaw becomes clinched, and his neck, back, arms, and legs become stiff, arched, and extended. His overall appearance becomes similar to a giant bow... he is bent backwards and held rigid by muscles of the back and chest. As the disease progresses, violent convulsions become more and more frequent. These convulsions are violent enough to actually crack vertebrae in the victim's spine. Death usually results from asphyxiation, caused by the convulsions.

Protect yourself and your family through proper immunization.

... Article in Safety Newsletter taken from "Facts of Life" from The Hartford. Submitted by Russ Mattson, Manager of Accident Prevention; Dravo Corp.

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NATIONAL SAFETY COUNCIL AWARD OF HONOR CERTIFIED FOR U.S.A. BALLISTIC RESEARCH LABORATORIES

Ballistic Research Laboratories will receive the NSC Award of Honor for operating 6,619,619 man-hours with a disabling injury from 25 January 1966 to 20 December 1968.

REMOTE CONTROL- A MODERN DAY BLESSING

SERIOUS BURNS AVERTED

Joseph M. Rossi, Safety Division
Picatinny Arsenal

The key to a good safety program is vigorous support and effort by all concerned. Before an Explosives Operator at Picatinny started his work assignment, he remembered the instructions of his supervisor and the standing operating procedures called for the wearing of supplied safety gear before starting his routine weighing operation.

On 20 September 1968, shortly after his lunch break, the operator proceeded to weigh out 1,000 grams of a pyrotechnic composition in the usual manner. He completed the weigh-out and picked up the container of material. As he placed it on the opposite end of the workbench it suddenly ignited and an intense, hot flash fire occurred.

The employee was well prepared for the occurrence of the hot flash fire. He was wearing the special aluminized protective hood and aluminized gloves, which were fabricated to rigid specifications through the joint efforts of the Loading and Safety Divisions. The hood and the gloves were severely scorched. Without a doubt, serious burns of the head, face, chest and hands were averted because the prescribed protective equipment was worn.

This employee is well aware that he was spared serious burns by wearing the safety gear provided for him on the job. He is highly enthusiastic in his praise of the well-designed equipment which protected him, saying, "It sure did a good job for me."

This incident points up the classic lesson of being well prepared by following the established standing operating procedure. Since written instructions were explicitly followed, no important step or safety consideration was omitted. When the incident suddenly struck, no personal injury was sustained.

Whenever hazardous processes, materials, or environment areinvolved, the importance of complying with the established approved procedure cannot be overemphasized.

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SOUVENIRS CAN BE DEADLY

George W. Williford, Explosives Safety Specialist
2705 Airmunitions Wing, Hill Air Force Base, Utah

Americans are souvenir collectors. We like to have something to remind us of the places we've been, the things we've seen and done. This is ordinarily a harmless practice, and the only damage is to our pocketbooks.

Another kind of souvenir collecting we indulge in, especially during wartime, is not so harmless. This is the collection of ammunition or other explosive devices.

No sane person would knowingly bring home live explosive devices, for to do so would endanger his family

and friends. As an alternative, souvenir hunters frequently attempt to inert these explosive devices, or have someone do it for them. This practice is in violation of paragraph 0202.2, AFM 127-100, as well as AFM 67-1.*

Since the beginning of the Vietnam situation, there have been reports of people being injured during or after the inerting procedure. In some instances personnel have been found with live or partially inert explosive components in their possession while traveling by USAF aircraft. Other reports indicate some people try to ship these items home in their hold baggage.

A marine inerted a grenade by removing the high explosive, but put the live detonator back in and brought the grenade to the US on a commercial flight. During customs check the grenade was confiscated.

Other marines were bringing back swagger sticks, or "short-timer" sticks, made of a wooden rod with a cartridge case on the butt end and an inert round of 7.65mm ammunition on the point. One was discovered to have a live primer in the 12-gage brass shotgun cartridge case on the butt. Another was found with live incendiary in the projectile on the point. These swagger sticks were confiscated during customs inspection.

An airman was injured when he picked up a grenade detonator which had been left on the aircraft. Another tried to inert a 20mm HEI round. He sawed the case through and poured out the powder. Then he started to drill into the base of the projectile with an electric drill. The projectile exploded low-order, injuring him.

A recent case involved the inerting of a grenade. This young airman carried the grenade into a shelter and asked two marines to show him how to inert it. One of the marines removed and discarded the detonator. The

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* See also Army Regulation 643-20, Personal Property - Control and Registration of War Trophies and War Trophy Firearms. AR 643-20 is also identified as OPNAVINST 3460.7, Air Force Regulation 125-13 and Marine Corps Order 5800.6.

airman then pulled a small arms cartridge apart and burned the powder in a C-ration can he was using for an ash tray. The detonator from the grenade had somehow ended up in the can, and when he touched it with his cigarette, it exploded. He lost the tip of his thumb and middle finger and received fragment wounds in his shoulder.

Explosive munitions are designed for a specific purpose - to kill the enemy and destroy his material. When you attempt to inert these items for souvenirs, you're placing yourself on the enemy's side so far as the explosive device is concerned. It could kill or maim you just as it could kill or maim an enemy.

Explosive devices should be used for their intended purposes. Don't attempt to inert them for souvenirs. This kind of souvenir is deadly.

Extracted from Safety Tips, an Air Force Logistics Command Aerospace Safety publication.

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CAN YOU MAKE IT SAFER?

A recent incident at an Army Materiel Command ammunition manufacturing plant gave fresh emphasis to old and hard learned explosives safety principles. Our explosives handling procedures and apparatus are not perfect. The fact that an explosives safety measure has been successful in the past does not guarantee it will always succeed in the future. Ways should be sought to make the procedure and the equipment safer, for the next explosion may be different.

This installation used a remotely controlled Accofil gun to charge XM89 detonators with NOL-130 primer mix. The mix was a sensitive material that contained lead azide and lead styphnate. The loading mechanism was inside a steel barricade. The operation could be observed through a three-fourths inch Plexiglas shield.

The charging barricade was made of three-eighths inch steel. It was a welded box, 28 by 34 inches and 48 inches high, including an extension above the

charging area with baffle plates to contain missiles in the event of an explosion. The Plexiglas window was 18 by 12 inches (216 square inches).

Months before the incident happened tests were made of the barricade. These tests, with 140 grams of primer mix, led to a conclusion that the barricade would provide needed protection for the operator. Accofil guns were put into operation within barricades. From time to time explosions occurred within the barricades. Each time these withstood the explosive forces as the tests indicated they should. Photo 1 shows how one barricade appeared from the outside following one of these explosions.

Eventually an explosion occurred that caused the shield to fail. About three ounces of the primer mix (far less than the 140 grams used in the tests) exploded high order while the dispenser wand was dumping the mix into the funnel guide in accordance with the standing operating procedure. The dispensing barricade contained nine loaded detonators which also exploded.

The three-fourths inch thick Plexiglas shield shown above withstood an Accofil gun explosion at an XM89 detonator charging station.

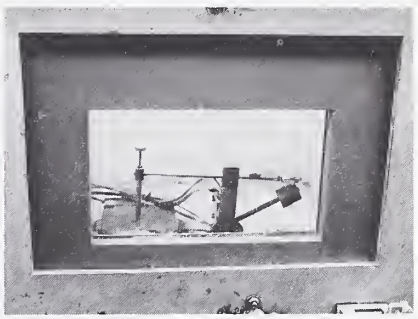
This Plexiglas shield did not provide the protection for which it was designed as did the one in Photo 1. This one was shattered in a high order primer mix detonation.

■ The barricade did not provide the protection for which it was designed. The welded metal box withstood the explosion, but the Plexiglas shield was shattered.

(See Photo 2.) The operator received foreign bodies in his eyes and a puncture wound in the throat. He was away from work for 12 days. Property damage amounted to $250.

A definite cause for the explosion was not established. There was no violation of the standing operating procedure. It was noted that aluminum foil had been placed in the barricade chimney to increase humidity and that this might have created some excess pressure in the barricade.

The shattered shield and the injured operator were proof that improvements in safety were needed. Installation personnel asked themselves the question, "What can we do to make it safer?" They found several answers and promptly took the following corrective measures:



1. The three-fourths inch Plexiglas in the shield window was replaced by one-inch thick material.

2. The size of the window was reduced from 216 to 90 square inches. (See Photo 3.) Steel plate was used to reduce the shield opening.

3. Lexan material three-fourths inch thick was ordered for use in replacing the Plexiglas.

4. Aluminum covers on top of the barricade and on other similar barricades, were removed.

5. The standing operating procedure was revised to reduce the number of detonators in the barricades and to reduce the amount of primer mix in each dispenser container.

It is not likely that this explosives operation is duplicated at your installation. It does not have to be for you to learn a lesson from the experience. Take a fresh look at your individual explosives operations. Can you find a way to make any one of them safer?

OFF-THE-JOB SAFETY

HOME FIREARM CHECK LIST

Type of Gun: Rifle___Shotgun___Revolver___Pistol___Other___

Use: (Circle one) Hunting Target Protection Collection

Caliber_____ Type of action_____

****

	Yes	No
1. Is the weapons' magazine, cylinder and/or chamber unloaded?	___	___
2. Is the ammunition stored in a separate place and secured (locked)?	___	___
3. Is the ammunition in a box, carton or container which identifies it correctly?	___	___
4. Is the weapon stored in a secure manner (locked)?	___	___
5. Is the storage rack, cabinet, closet or case always kept locked?	___	___
6. When handling a firearm, do you always keep your finger out of the trigger, guard, except when deliberately firing it?	___	___
7. Is the weapon storage key kept from children?	___	___
8. Is the gun checked thoroughly before being used or stored?	___	___
9. When the firearm is removed from storage, is the action opened immediately to reconfirm that it is empty?	___	___
10. Have the users of the gun been instructed in firearm safety?	___	___

	Yes	No
11. Are the metal parts of the gun free of rust and heavy grease?	___	___
12. Can you always state: "I know it is not loaded"?	___	___
13. Are all guns unloaded when not in use, i. e., in homes, vehicles, etc.?	___	___
14. Do you treat every gun as if it were loaded?	___	___
15. Do you always handle the gun in such a manner that the muzzle is never pointed toward any person?	___	___
16. Is the bore of each weapon clean and free of any obstructions?	___	___
17. Does the weapon function properly, i. e., trigger, receiver, bolt, safety, firing pin, ejectors, cylinder, etc.?	___	___
18. Are you certain you carry only that ammunition for which the weapon is designed?	___	___
19. Is the gun cased or action open when it is removed from or put into a vehicle?	___	___

NOTE: These questions deal with the subject of firearm safety and are intended primarily for guns in the home, but they also can be used as a check list by the hunter or target shooter before leaving the home. The questions have been framed so the answers should be "yes". It is suggested that the check list be used for each gun in the home.

- Safety Check List distributed by

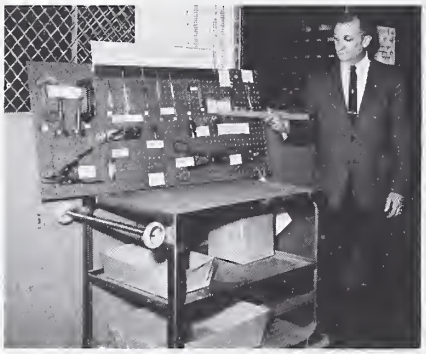
Safety Office, Kansas Army Ammunition Plant

SENECA ARMY DEPOT WORKER JOINS THE WISE OWL CLUB

Richard Sarratori was tying down dump trucks on railway flat cars at Seneca Army Depot. He was using six strands of #8 gauge wire, with the ends twisted into the strands to make a wire cable. One wire end was improperly secured in the cable. It flew back and struck the lens of Sarratori's safety glasses. The lens was shattered but the worker was uninjured. In the photo Sarratori is shown telling Fred Asay, Seneca Army Depot safety inspector, how his glasses prevented injury to his eye.

IDEAS FOR SAFETY

Norman Smith, Safety Director
New Cumberland Army Depot, New Cumberland, Pa.



Mr. Clair L. George, Chief, Material Requirements Branch of the Directorate for Maintenance, points to his display of improperly used tools and the damage resulting from such use. Mr. George displays a great amount of interest in his support of the safety program. His interest has contributed greatly to the success of the safety program of the depot.

"Every little bit helps." Mr. George's idea not only helps in the cost reduction, but points out the hazards of using tools improperly. A damaged tool is not a safe tool. Much has been written regarding proper use and care of hand tools. Even with all this training and instruction, personnel are inclined to gamble. Therefore, the demands placed on the supervisor are greatly multiplied. A good supervisor must teach safety, preach safety and last but most important, he must practice safety.

ROCK ISLAND ARSENAL WINS AMC AWARD OF HONOR FOR SAFETY

Rock Island Arsenal won an AMC Award of Honor for Safety for FY 1968. Major General O. E. Hurlbut (left), Commanding General, U. S. Army Weapons Command, presented the award to Colonel J. J. Albertson, Rock Island Arsenal Commander. The Rock Island Arsenal FY 1968 safety program was recognized as the best within the U. S. Army Weapons Command in FY 1968.

WATERVLIET ARSENAL WINS SAFETY AWARD

Watervliet Arsenal received an AMC Award of Merit for FY 1968. Colonel Arthur H. Sweeney, Jr. (left), deputy commander of the U. S. Army Weapons Command, presented the award to LTC O. W. Lee, Jr., acting commanding officer of the Arsenal. The Arsenal's Safety Director, Frank J. McGinnis is shown at right. Colonel Sweeney had served as Watervliet's commander during the time the award was earned.

RADFORD ARMY AMMUNITION PLANT WINS NSC AWARD OF MERIT

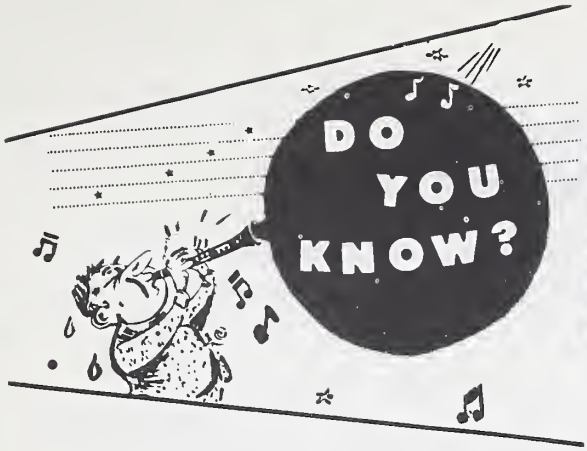
The Radford Army Ammunition Plant has received a National Safety Council Award of Merit for its Fiscal Year 1968 safety performance. Shown holding the award plaque are LTC D. G. Weeks, Commanding Officer, and J. E. Settles, Assistant Plant Manager, Hercules Incorporated. Left to right in the center are G. F. Dale, the operating contractor's Safety Superintendent at the plant, and W. T. Fowler, Army Safety Officer.

UNSAFE AWARD CREATES SAFETY AWARENESS

The U. S. Army Terrestrial Sciences Center located in Hanover, New Hampshire employs approximately 300 employees, military and civilian. The major problem of the Safety Office was keeping people safety conscious and alert for safety hazards. The back door approach was considered and USA TSC developed the Unsafe Award or a Half Safe Award which has been nicknamed Haphazard Harry.

Haphazard Harry is a traveling desktop award presented to anyone caught in disregarding, or known to have disregarded, a safety practice or regulation. The misdeed may or may not have caused an accident, but the potential is clearly evident. The Unsafe Award is promptly presented to the individual by the Safety Office, and must remain in view on the desk or workbench until another award winner is singled out. The award can be given by any person observing someone committing an unsafe act or for an injury. Also the present holder can pass the award on for the same reasons. More often than not, he (or she) is anxious to pass it on as quickly as possible to another awardee, hence an employee monitoring system is put in motion. This is the only way Haphazard Harry can be moved. The Safety Office is notified of the transfer of Haphazard Harry and this serves to uncover safety hazards for prompt Safety Office action.

The Unsafe Award isn't especially ornamental, as a glance at the photo readily shows. It is a 14-inch, one-armed, one-legged skeleton peering out from a mailing tube. Across the top is the label, "Half Safe".



Here are ten questions that will test your knowledge of safety requirements that you will need under different circumstances. The answers to all of them may be found in AMCR 385-224. How many can you answer without referring to the regulations? The correct answers and references appear on pages 40 and 41

1. In locations where dust, vapor, or fume atmospheric contaminants are present, what is the primary control method that should be used?

   Answer and reference:

2. Would you have cause for concern if you discovered an initiating explosive being air heated to 160°F.?

   Answer and reference:

3. Is it ever permissible for incomplete boxes of ammunition and explosives to be stored in a magazine that contains items packed in accordance with approved drawings?

   Answer and reference:

4. By what amount may the existence of a barricade reduce the quantity-distance for Class 2 materials?

   Answer and reference:

5. Are wooden floors prohibited from use in any magazine?

   Answer and reference:

6. Where concurrent operations must be performed, how should personnel exposure be controlled?

   Answer and reference:

7. What protection against lightning is required for metal smokestacks?

   Answer and reference:

8. If a state law requires a protective appliance that is not required by AMCR 385-224, should it be installed at an AMC installation?

   Answer and reference:

9. How fast may an Army-owned locomotive be operated while it is crossing a plant highway?

   Answer and reference:

10. May a gasoline-powered materials handling truck be stored overnight in a general warehouse?

    Answer and reference:

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REFERENCE PUBLICATIONS

AR 55-17, 13 November 1968
Transportation and Travel, Lease of Conex Transporters.

AR 55-56, 11 December 1968
Transportation and Travel, Transportation of Chemical Ammunition, Chemical Agents, and Other Dangerous Chemicals.

AR 55-36, 11 December 1968
Transportation and Travel, DOD Use of Domestic Civil Transportation Under Emergency Conditions.

AR 380-105, 29 November 1968
Military Security, Policy and Procedure Governing Use of Code Words, Nicknames, Short Titles, and Similar Devices.

DA Circular 385-21, 12 December 1968
Safety, Safe Operation of Truck Utility, $^{1}/_{4}$-Ton, 4X4, M151.

AMCR 385-104, December 1968
Safety, Safety Criteria for Processing, Handling, and Decontamination of Agent CS.

THE WRONG CORD

Robert R. Cavanaugh, Safety Officer
St. Louis Army Ammunition Plant

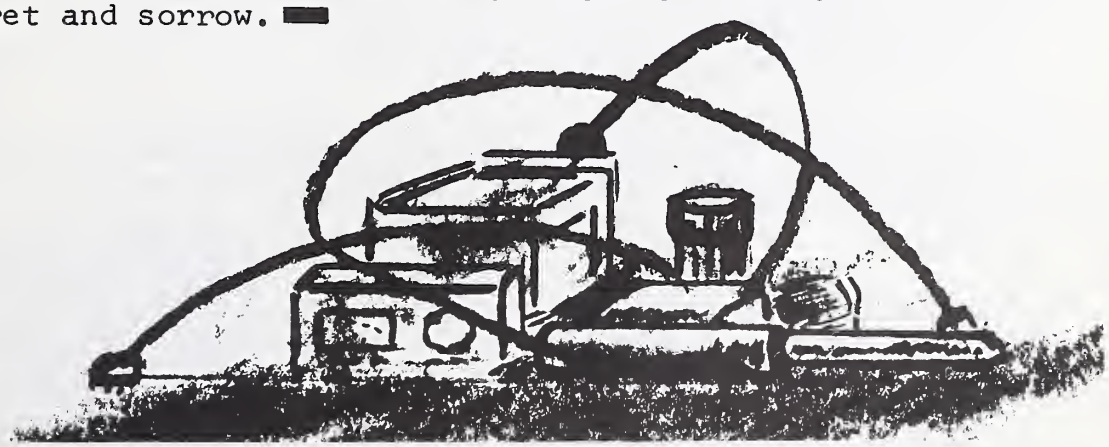
■ The cordless electric toothbrush, shaver, lamps, radio, carving knife and rechargeable flashlights have been introduced the past few years to make life easier. All have batteries that are hermatically sealed, and they give off no corrosive vapors to be deadly.

The problem is that people use them. There are several cords to recharge these gadgets. These cords look much the same as other cords with which we are familiar. You grab a cord and plug it into an electrical outlet. Then you go off, thinking you may forget about it until you need the item sometime later.

If the cord you used was not the right one, you may be in trouble. It overheats and may cause the battery to explode and start a fire.

When you purchase a new gadget, label the cord. Keep it in good condition so it does not get frayed. Check it periodically. And above all, do not leave it unattended when it is connected to an electrical outlet. If a cord is warm to the touch, disconnect it, because there is something wrong that could cause a fire.

When proper care is given to electrical appliances, they will give you many hours of service and enjoyment. If you mistreat them, they may cause you regret and sorrow. ■



Here are the answers to the questions on pages 37 and ? . All questions were based on information contained in AMCR 385-224. A reference to the pertinent paragraph follows each answer.

1. Provide properly designed local exhaust ventilation to control atmospheric contaminants at the point of generation. Reference: Paragraph 1111.

2. Yes. Temperatures should be limited to between 120° and 140°F. (50° to 60°C.) when an air blowing device is used to dry initiating explosives. Reference: Paragraph 1401.

3. Yes. The explosives and ammunition in the incomplete boxes must be in standard packages. The boxes must be marked conspicuously and placed in designated locations. Reference : Paragraph 1808.

4. None. Quantity-distances are not to be reduced by the presence of barricades. Reference: Paragraphs 1725a, 1726e and Table 1731.

5. Yes. Wood floors and the use of "rubberoid" or other floor covering are prohibited in magazines used for storage of ammunition and components with chemical group A fillings. Reference: Paragraph 1804.

6. Exposure of personnel should be controlled by installation of dividing walls so that the number exposed is no greater than if a single type of ammunition were worked on. Reference: Paragraph 1105.

7. Metal smokestacks shall be electrically continuous and grounded. When these conditions exist, no further lightning protection is required for metal smokestacks. Reference: Paragraph 816a.

8. Yes. All protective appliances required by the laws of the state in which a plant is located should be installed whether or not specifically included in AMCR 385-224. Reference: Paragraph 914b.

9. The speed of the locomotive should not exceed 10 miles per hour while it is crossing a plant highway. Reference: Paragraph 2105b.

10. A gasoline-powered piece of materials handling equipment may be stored overnight in a warehouse. A minimum distance of 10 feet shall be maintained between the equipment and combustible material. Reference: Paragraph 2407.

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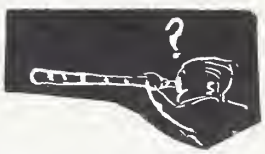
MINISKIRTS FOR SAFETY?



Recently reported in a Phoenix, Arizona, newspaper was the fact that miniskirts might be helpful in traffic safety!

The Arizona Safety Division in its newsletter, quoted the American Automobile Association as saying that, "because automobile headlights aim downward, they readily pick up the stockings or bare legs in the beam. Naturally, the more stocking or leg exposed, the easier it is for motorists to see and thus prevent an accident."

Perhaps there is an overriding influence between dress and auto design. It seems that no matter what the subject, safety factors have to be taken into consideration!

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